

What is claimed is:

1. A hole cutting apparatus comprising:
  - a. a central portion axially holding an arbor and a pilot drill;
  - b. a rim having a substantially continuously circular circumference;
  - c. at least three spokes connecting said central portion with said rim;
  - d. groove cutting members circumferentially arrayed in a number equal to that of said spokes; and wherein said groove cutting members are fixed at said rim at positions immediately adjacent said spokes and wherein said groove cutting members are circumferentially oriented in a substantially equal radial distance to said pilot drill and wherein said groove cutting members are arrayed in a substantially equal offset to said circular circumference.
2. The hole cutting apparatus of claim 1, wherein said central portion, said spokes and said rim are monolithically fabricated.
3. The hole cutting apparatus of claim 1, wherein said central portion, said spokes, said rim and said cutting members are monolithically fabricated.
4. The hole cutting apparatus of claim 1, wherein at least one of said groove cutting members features a sliding feature in front of a cutting feature with respect to a cutting direction of said groove cutting members.

5. The hole cutting apparatus of claim 1, wherein at least one of said groove cutting members is fixedly held in a cavity of said rim.

6. The hole cutting apparatus of claim 5, wherein at least one of said groove cutting members is fixedly held in said cavity via a cap screw radially and tensile withholding itself at said spoke while pressing said at least one groove cutting member against an inside radial wall of said cavity, wherein said cap screw is reaching through an opening of said at least one groove cutting member.

7. The hole cutting apparatus of claim 5, wherein said cavity is finite in other than axial direction.

8. The hole cutting apparatus of claim 7, wherein at least one of said groove cutting members is fixedly held in said cavity via a cap screw radially withholding itself in a press contact at said spoke while pressing said at least one groove cutting member against an outside radial wall of said cavity, wherein said cap screw is reaching through an opening of said at least one groove cutting member, and wherein a head of said cap screw is peripherally accessible through a radial rim opening.

9. The hole cutting apparatus of claim 8, wherein said cap screw is pressing said at least one groove cutting member via a nut having a circumferential locking contour corresponding to a rotation lock feature of said cavity.

10. The hole cutting apparatus of claim 8, wherein said at least one groove cutting member is pressed against said outside radial wall with two bridge contacts being in opposing distance relative to said cap screw such that said at least one groove cutting member is resiliently deflected.

11. The hole cutting apparatus of claim 5, wherein said circular circumference has a substantially continuous surface.

12. The hole cutting apparatus of claim 1, wherein said circular circumference has a low friction coating.